Period: Date: Name:

**History of Astronomy Take Home Assignment**

**Directions: Access and read the online text, chapter 22, section 1 and then answer the following questions. Type directly into the document, or print out and write in your answers. Please print out and turn in on time.**

1. Compare/contrast the Geocentric and Heliocentric models of the solar system. Which model turned out to be correct?

2. Which early civilization is credited with having begun the “Golden Age” of astronomy? How did these people explain the natural world?

3. How did Aristotle determine that the Earth was round?

4. Who first proposed the heliocentric view of the universe? How many years ago did this person live? (The year 230 BC was the last year of this person’s life)

5. Do some research on European History during the Middle Ages time period, focusing specifically on ruling authorities, doctrine and “accepted” teaching and thought. After researching, **explain why it could have been dangerous for early scientists/astronomers to publish or present their findings to the public during this time period.** (Hint: What happened to Galileo?)

6. An early understanding of the universe held that beyond the orbits of the planets there was a solid, transparent crystalline sphere in which the stars and other night time lights were fixed. What was this sphere known as?

a. Celestial Sphere b. Outer Sphere

c. Star Globe c. Celestial Roof

7. Describe the shapes of planetary orbits as we know them today.

a. Circles b. Rectangular

c. Triangular d. Elliptical

8. What invention enabled Galileo to make his observations and ultimately provide groundbreaking evidence that supported the Copernican view of the solar system? What were some of Galileo’s observations?

9. Who developed the 3 laws of Planetary Motion?

10. Which of Kepler’s laws of planetary motion explains why planets move faster near the Sun and slower when they are far from the Sun?

a. The Law of Ellipses (#1) c. The Law of Equal Areas (#2)

b. T2 = d3 (#3) d. The Law of Dancing Turtles

11. Which of Kepler’s laws of planetary motion explains the shapes of planetary orbits?

a. The Law of Ellipses (#1) c. The Law of Equal Areas (#2)

b. T2 = d3 (#3) d. The Law of Dancing Turtles

12. Which of Kepler’s laws of planetary motion explains the relationship between how long it takes a planet to orbit the Sun and how far the planet is from the Sun?

a. The Law of Ellipses (#1) c. The Law of Equal Areas (#2)

b. T2 = d3 (#3) d. The Law of Dancing Turtles

13. Which early astronomer, of Danish nobility, created astronomical tools and made observations of the heavens for most of his life during the 16 century (1500’s)?

a. Copernicus b. Tycho Brahe

c. Johannes Kepler d. Isaac Newton

14. What is an Astronomical Unit (AU)? How many miles is 1 AU? (**1km = .62mi)**